

### **REMARKS**

Claims 1 – 6, 8 and 9 remain in this application. Claim 7 has been deleted. Claims 1, 2, 3, 4, 5 and 8 have been amended.

The Examiner has rejected each of the claims under 35 U.S.C. 103(a) as being obvious in view of Clapp et al. in combination with various other references. In each case, the centerpiece of the rejection is page 2, paragraph 2 of Clapp where the Examiner indicates a teaching is made as to a multi-dimensional seismic plan view utilizing at least four dimensions. Applicant traverses all of the rejections on the grounds that Clapp does not teach or suggest the invention of the claims.

Clapp teaches the plotting of fields (also called maps or structures) that represent multi-dimensions scalar functions which are presented in a four dimensional physical space. In other words, each field or structure is first defined by multiple scalar functions and then plotted in an x, y, z and time coordinate system. The point is that data is converted into a representative structure or field. Clapp simply plots structures, i.e., AVS fields, on top of each other.

The current invention, on the other hand, is the use of CMP gathers to overlay structures like those taught in Clapp. Simply put, plotting CMP gathers is not the same as plotting fields (as taught in Clapp) because the fields are ultimately “representations” of data (in the case of Clapp, multi-dimensional scalar data). In other words CMPs are not “fields” as the term is used in Clapp. By overlaying CMP gathers on plots of fields, the accuracy of the representations, i.e., the fields, can be verified. Use of the term “multi-dimensional” in the instant application refers to the CMP gathers and not to the fields which the CMP gathers overlay. Specifically, the term “multi-dimensional” in the instant application refers to x, y and z spatial coordinates and time or distance as the “fourth” dimension.

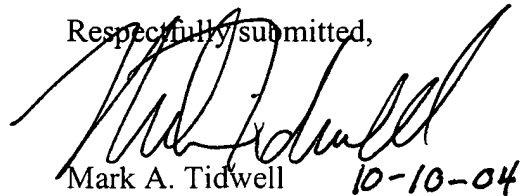
It is true that a map or field or structure can be generated from a CMP gather, but that is not the essence of the current application. Rather, the CMP gather is being laid over a map, field or structure to determine the validity of the map, field or structure. Applicant suggests that the Examiner is confusing something that could be derived from CMP gathers, such as a map, field or structure, with the CMP gathers themselves.

Notwithstanding the foregoing, the claims have been amended to better clarify the differences set forth above.

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Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Mark A. Tidwell', is written over the typed name and date.

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